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DEPARTMENT OF FISH GAME

Jerry M. Conley, Director

Henrys Lake Hatchery

Annual Report

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by

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ABSTRACT ,

Henrys Lake egg taking was down this year, because of fewer cutthroat trout arriving at the spawning facilities.

The hybrid run increased however, and eggs were taken from these fish to compensate for a shortage of cutthroat eggs, and were to be used in stocking mountain lakes.

Soft shelled disease was noted earlier in the spawning run this year, and was responsible for a large egg loss.

Steelhead and hybrid eggs were practically a total loss, due to cutthroat not being available at the time steelhead milt was flown in from Dworshak and also the steelhead milt may have been a little green.

Eggs were shipped to Mackay Hatchery to hold and return to Henrys Lake instead of to Ashton where they were originally planned.

Henrys Lake Hatchery buildings and grounds got a new face lift this year.

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OBJECTIVES

The first concern is to maintain good fishing in Henrys Lake by taking cutthroat eggs, hybrid eggs and raising fingerlings and releasing them back into lakes in the fall.

To take enough cutthroat and hybrid eggs to fill the needs of other hatcheries in the state.

We are presently trying to raise larger fingerlings to plant back into lakes in the fall, hoping that the larger fingerlings would have a better survival than when planted at smaller sizes.

Changing methods of planting fish in lakes is also being tried. We would like to mark fingerlings and plant some by boat all around the lake, and compare this with marked fish planted from bank or truck planting. We are having trouble at the present time getting fingerlings large enough to mark before planting.

Henrys Lake is designated by the Department as a trophy lake, producing large cutthroats, hybrids and brook trout.

Trying to keep a good cutthroat population without planting too many hybrids and brook trout is a problem, and we are working toward a solution at this time.

INTRODUCTION

Henrys Lake Hatchery is located on Highway 87, approximately 15 miles from West Yellowstone, Montana. It sets on the north side of Henrys Lake, and has a beautiful setting. The hatchery grounds consist of two residences, one long building containing a garage, storage room, office and hatchery building. On the lake front a fish ladder extends from the lake to a spawning house, where the fish eggs are taken.

There is a release pond located between the hatchery building and spawning house, where fingerlings are raised and turned loose, to go down through the spawning house and through the ladder into the lake.

There are also three small vats in the hatchery building to start fry in before transferring them into the rearing pond. There is a battery of 10-16 tray stacks of Heath incubators to handle the eggs from green eggs to swim-up, prior to placing them in the vats.

Henrys Lake water supply is 1 cfs of spring water coming out of the mountain across the highway from the hatchery. Average water temperature is about 42º which makes for slow fish growth.

The water supply contains very little silt or algae, minimizing problems in the incubators or main supply lines to the hatchery. The water is gravity fed to all portions of the hatchery.

FISH PRODUCTION

This year, 517,996 fish were released from Henrys Lake Hatchery, partly through the fish ladder or being planted by boat. The fish weighed a total of 809 pounds.

Fish feed fed amounted to 650 pounds with a conversion rate of 80:1.

Oregon moist pellets were fed to start fry on feed, then switched to dry feed. The fish did reasonably well, except for dietary deficiency, and this had a tendency to hold them back in growth. After they were put outside in the pond, they grew much better, and rooked better. The water temperature is about 5 to 7 degrees warmer in the pond than in the hatchery, which helped growth considerably. Bacterial gill disease occurred **in** the hatchery and was treated with Copper Sulfate.

Approximately 970,000 cutthroat eggs were shipped to Mackay Hatchery to hatch and be reared until fall, and to be returned and planted in Henrys Lake. Ashton Hatchery was supposed to handle these eggs, but it was under construction this year and could not hold the eggs or fry.

About 250,000 cutthroat eggs were shipped to McCall Hatchery and Sandpoint Hatchery. These eggs were returned as fingerlings to be planted in Henrys Lake.

Some 2,763,572 cutthroat eggs were taken, of which 1,738,288 eyed up and were raised or shipped to other hatcheries. This is an eye-up of 65.8%, which is very low. Henrys Lake is noted for soft shelled eggs and this was probably one of the worst incidences of the disease in recent years. Problems with soft shell began 1 March, which is very unusual. Generally fish from Henrys Lake do not produce soft shelled eggs until late **in** April or May.

No cause of the early onset of soft shell is apparent. The lake was quite warm during the summer of 1979, and was fluctuated a great deal. Maybe these conditions have some bearing on the soft shell problems.

Hybrid eggs tended to be softer than cutthroat eggs. Some 870,960 male cutthroat plus hybrid female eggs were taken to make up for a shortage of cutthroat eggs. These eggs were to be used in high mountain lake planting.

We shipped 434,720 of these to Mackay and McCall hatcheries. This was an eye-up of 56.1%. These fish seemed to grow and do-well after hatching.

All eggs were brought into the hatchery and treated with Wyscodene in the incubators, which appeared to toughen the shells fairly well.

Mackay Hatchery returned approximately 432,360 cutthroat fingerlings to Henrys Lake, and Henrys Lake Hatchery planted 517,936 cutthroat. Approximately 100,000 cutthroat were returned to Henrys Lake from Sandpoint and McCall hatcheries, and Ashton Hatchery planted 120,000. This produced a total of 1,170,296 cutthroat fingerlings that were returned to Henrys Lake this fall.

This is slightly below the targeted amount we had hoped to return to go back into the lake, but all hatcheries seemed to be having difficulty in rearing cutthroat from Henrys Lake this year. We had hoped to return 1,500,000 cutthroat fingerling back into the lake this fall.

F_1 hybrid eggs were almost a total loss this year. At the time the steelhead milt was obtained, the cutthroat run had declined, and very few good fish were available for spawning. We were concerned that the steelhead sperm was not too viable.

We took 279,000 steelhead plus cutthroat eggs and had an eye-up of 88,160. These were shipped to Mackay and 32,320 were returned to plant in Henrys Lake. Half of these fish were released **in** the ladder, and half were planted around the lake.

Steelhead sperm was obtained from Dworshak National Hatchery, and Rex Spackman and Hark Misseldine of Ashton Hatchery assisted with spawning of the hybrids.

HATCHERY IMPROVEMENTS

Henrys Lake Hatchery received a new face lift this year, with two new rooms added on to the Superintendent's residence. There was a new roof put on the house, a new drain field was installed, and approximately 40 loads of dirt was hauled into the back yard to build up the yard to help control seepage of ground water. All buildings were painted and lawns were replanted around the residence this fall.

A general cleanup was made during the summer. Brush and trees were removed to beautify the yard and give hatchery grounds a new look. A new pipeline into the hatchery was installed to replace one that was in very bad condition.

There were also numerous small jobs completed by construction crews. The wiring in the residence was replaced, new counter top and sink put in the kitchen, new storm windows were installed, carpet was laid in the bedrooms, and linoleum was installed on the utility room floor.

A new concrete floor was poured in the hatchery building. The incubators had to be raised to compensate for the raised floor, and the water line to the incubators also had to be changed.

MISCELLANEOUS ACTIVITIES

I was quite amazed at the number of people coming into visit the hatchery grounds. The hatchery is located on the main by-way to Yellowstone and many tourist attractions. There is even a great number of people coming in by snow-mobile in the winter.

I had the opportunity to meet many wonderful people and explain all the hatchery procedures to them. It was a wonderful experience. I am sure many friends were made for the Department by the work that is being done at the Henrys Lake Fish Hatchery.